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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/511,582  
Filing Date: October 18, 2004  
Appellant(s): BOSMA, EPKE

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John A. Castellano  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 6/15/09 appealing from the Office action  
mailed 12/16/08.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

|              |              |         |
|--------------|--------------|---------|
| 5704311      | van den Berg | 01-1998 |
| SE200000179A | Birk         | 11-2000 |

20040168643A1                    Nilsson                    09-2004

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1-3,5-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The added limitation of "said second indicator of mastitis not based on a milk quality measured by the first indicator" is not explained or described well enough in the specification for one to understand. The second indicator of mastitis does depend on the first indicator milk quality (which influences or indicates mastitis or not) in order for the second indicator to be performed because the claim clearly states that "and only if said first indicator of mastitis indicates mastitis, a second indicator of mastitis is performed." If the quality of milk from the first indicator is not good, then a second indicator of the quality is performed, thus, the added limitation seems to contradict the inventive concept. As explained on page 7 of the remark filed 9/2/08, Applicant explained that this added limitation is meant to say that two different types of mastitis indicators are employed and one indicator measures milk conductivity and the other

indicator measures cell count. However, this is not the same as added in the claim because the added limitation does not state two different indicators measuring two different qualities. The quality of the milk is an indicator of mastitis or not, and it is from this quality of milk from the first indicator that the second depends on in order to perform a second reading if the milk has mastitis or not.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-3,5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** The added limitation of "said second indicator of mastitis not based on a milk quality measured by the first indicator" is confusing and unclear because if one reading the lines preceding this limitation in claim 1, it appears that the second indicator does based on the quality measured from the first indicator, and quality indicates mastitis or not. This added limitation is not the same as saying measuring mastitis with two different types of indicator, which one measures conductivity and the other measures cell count.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-3,5,7 are rejected under 35 U.S.C. 103(a) as being unpatentable over van den Berg (5704311) in view of Birk (SE 200000179A on form PTO-1449).**

For claims 1-2, van den Berg teaches a method for separating a first quantity of milk drawn from a milking animal in an automatic milking machine and a second quantity of milk drawn from the milking animal in said milking machine, comprising: milking an animal using said automatic milking machine 18, measuring a first indicator of mastitis during said milking (col. 1, lines 50-55,col. 2, lines 11-35, first indicator indicates mastitis by decreasing below threshold value D1 calculated from mastitis sensor M and flow sensor S), and only if said first indicator of mastitis indicating indicates mastitis (by falling below threshold value D1), a second indicator of mastitis is performed (col. 1, lines 50-55,col. 2, lines 11-35, second indicator of mastitis is the threshold value D2, which depends on the extent of the mastitis result of D1, D2 also based on calculation of mastitis sensor M and flow sensor S), said second indicator of mastitis not based on a milk quality measured by the first indictor (because of progression of milk yield and flow versus time, meaning the first indicator might have a higher yield than the second indicator or vice versa, col. 2,lines 28-35), said second indicator of mastitis includes: analyzing at least a part of said first quantity of milk using mastitis sensor M and flow sensor S, and operating a valve 24 in dependence on the threshold value reading indicating mastitis. However, van den Berg is silent about an on-line cell counter and plurality of containers correlating to first, second, and third threshold values for different superior quality of milk.

Birk teaches similar method as that of van den Berg in which Birk employs an on-line somatic cell sensor/counter 25 together with a computer 35 to obtain cell readings to detect mastitis. In addition, Birk also teaches operating valves 2a-5d in response to the cell readings in relation to threshold readings so as to separate the milk in different containers according to different milk quality. It would have been an obvious substitution of functional equivalent to substitute the sensors as employed in van den Berg with an on-line cell counter as taught by Birk, since a simple substitution of one known element for another would obtain predictable results. KSR International Co. v. Teleflex Inc., 127 S. Ct. 1727, 1739, 1740, 82 USPQ2d 1385, 1395, 1396 (2007). In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ various containers as taught by Birk to contain different quality of milk based on cell counts in relation to threshold values in order to separate the milk into different level of quality of milk for sale or other use.

For claim 3, van den Berg as modified by Birk (emphasis on van den Berg) further teaches wherein said first indicator of mastiffs is one indicator, or a selection of multiple indicators (van den Berg teaches flow and mastitis sensors together), selected from a group of indicators comprising: the conductivity of said first quantity of milk, the NAgase value of said first quantity of milk, the Urea value of said first quantity of milk, the temperature of said first quantity of milk, the milk flow from said milking animal or the milk quantity from a teat of said milking animal

For claim 5, van den Berg as modified by Birk further teaches wherein said first quantity of milk drawn from one milking animal is collected in an end unit for the duration of performing the somatic cell count.

For claim 7, in addition to the above, Birk teaches a method for separating a first quantity of milk drawn from a milking animal in an automatic milking machine and a second quantity of milk drawn from the milking animal in said milking machine comprising milking an animal using said automatic milking machine, wherein said first quantity of milk is collected from a first milking animal and said second quantity of milk is collected from a second milking animal (page 4, lines 17-18). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first quantity of milk be collected from a first milking animal and said second quantity of milk be collected from a second milking animal as taught by Birk in the method of van den Berg as modified by Birk in order to save time and cost by having the total milk from all animals be analyzed for mastitis and not just one animal only.

**Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over van den Berg as modified by Birk as applied to claim 1 above, and further in view of Nilsson (204/0168643A1 ).**

van den Berg as modified by Birk is silent about wherein said first quantity of milk is collected from a first teat of a milking animal and said second quantity of milk is collected from a second teat of said milking animal.

Nilsson teaches similar method as that of van den Berg as modified by Birk in which Nilsson teaches wherein said first quantity of milk is collected from a first teat of

milking animal and said second quantity of milk is collected from a second teat of said milking animal. See [0018] thru [0021]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first quantity of milk is collected from a first teat of a milking animal and said second quantity of milk is collected from a second teat of said milking animal as taught by Nilsson in the method of van den Berg as modified by Birk in order to analyze all teats for mastitis and not just only one teat.

**(10) Response to Argument**

**A. CLAIMS 1-3 AND 5-7 ARE REASONABLY CLEAR AND PRECISE.**

**Appellant argued that claims 1-3 and 5-7 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. The Examiner finds the phrase "said second indicator of mastitis not based on a milk quality measured by the first indicator" added to claim 1 in Applicants' response of September 2, 2008 confusing and unclear.**

The Examiner still believed that the added limitation of "said second indicator of mastitis not based on a milk quality measured by the first indicator" is confusing and unclear because if one reading the lines preceding this limitation in claim 1, it appears that the second indicator does based on the quality measured from the first indicator, and quality indicates mastitis or not. The first indicator is a quality measuring instrument (i.e. conductivity is a quality in milk), thus, this quality from the first indicator detects mastitis or not. According to the flow chart of fig. 3, clearly, the second indicator (labeled as "Cell Count") does depend or based on a milk quality (i.e. conductivity) measured by

the first indicator (labeled as “Measure Conductivity”). Thus, with this language and the 112 1<sup>st</sup>, the Examiner concluded that the limitation is unclear and confusing because it is understood that the second indicator is based on a milk quality measured by the first indicator.

**B. CLAIMS 1-3 AND 5-7 ARE ENABLED IN VIEW OF THE APPLICATION AS FILED.**

**Appellant argued that claims 1-3 and 5-7 stand rejected under 35 U.S.C. § 112, first paragraph for allegedly failing to comply with the enablement requirement. The Examiner finds that the phrase "said second indicator of mastitis not based on a milk quality measured by the first indicator" added to claim 1 in the September 2, 2008 Amendment is not disclosed in the specification in such a way as to enable one skilled in the art to make or use the subject matter of the phrase. The specification enables the full scope of claim 1 when reasonably interpreted.**

The added limitation of "said second indicator of mastitis not based on a milk quality measured by the first indicator" is not explained or described well enough in the specification for one to understand. The second indicator of mastitis does depend on the first indicator milk quality (which influences or indicates mastitis or not) in order for the second indicator to be performed because the claim clearly states that "and only if said first indicator of mastitis indicates mastitis, a second indicator of mastitis is performed." If the quality of milk from the first indicator is not good, then a second indicator of the quality is performed, thus, the added limitation seems to contradict the

inventive concept. As explained on page 7 of the remark filed 9/2/08, Applicant explained that this added limitation is meant to say that two different types of mastitis indicators are employed and one indicator measures milk conductivity and the other indicator measures cell count. However, this is not the same as added in the claim because the added limitation does not state two different indicators measuring two different qualities. The quality of the milk is an indicator of mastitis or not, and it is from this quality of milk from the first indicator that the second depends on in order to perform a second reading if the milk has mastitis or not. In addition, fig. 3 of Appellant clearly shows that the second indicator (labeled as "Cell Count") does depend or based on a milk quality (i.e. conductivity) measured by the first indicator (labeled as "Measure Conductivity"). The only way cell count is performed is because it is based on the quality reading, i.e. conductivity, from the measure conductivity from the previous step in the flow chart. Thus, cell count or second indicator is based on a milk quality (i.e. conductivity) measured by the first indicator.

C. THE CLAIMS ARE NOT OBVIOUS OVER VAN DEN BERG IN COMBINATION WITH ANY OTHER REFERENCE.

**Appellant argued that Birk does not disclose the cell counter for which Birk alone is applied. With regard to claim 1, the Examiner alleges that van den Berg teaches each and every feature of this claim, with the exception of the "on-line cell counter for counting the number of cells" and first and second containers, for which only Birk is applied. Applicants respectfully submit that Birk does not teach or suggest a "second indicator of mastitis including analyzing at least a**

**part of said first quantity of milk using an on-line cell counter for counting the number of cells."**

Cleary from page 4, lines 5-15, Birk teaches measuring elements 25 for measuring quantity and quality such as conductivity, temperature, light absorption, blood content, somatic cell count, etc., thus, obvious this apparatus 25 is capable of counting cell because counting cell is one of the quality/quantity that Birk states that this element 25 can performed in correlation with a computer 35. On-line merely means through a computer system, which, again, clearly, Birk teaches measuring elements 25 in correlation with computer 35. The floating body in line 2-6 on page 4 is one option but if Applicant reads on to lines 5-15, Birk clearly states the measuring elements 25 can be used as an alternative to the flow sensor or the floating body.

**Appellant argued that Van den Berg does not disclose the second indicator for which Van den Berg alone is applied. Further, with regard to claim 1, the Examiner alleges that only van den Berg teaches that the second indicator of mastitis is "not based on a milk quality measured by the first indicator."**

As mentioned in the 112 rejections above, this added limitation is unclear and does not reflect Applicant's explanation regarding using two different types of indicator for two different readings. In addition, even if this added limitation is clear, which it is not, van den Berg still teaches the limitation because, from col. 2,lines 11-35, the second indication of mastitis is the threshold value D2, which depends on the extent of the mastitis result of D1, and D2 is of different quality than D1 because of different progression of milk yield versus time. Note also that col.8, lines 52-65, talk about the

two indicator of mastitis, D1 & D2, which D2 is dependent on D1. Both D1 and D2 are readings from mastitis sensors and flow sensors, which each D1,D2 is of different quality due to progression of milk yield.

**Appellant argued that Nilsson does not cure, nor does the Examiner apply Nilsson for curing, the disclosure and suggestion deficiencies of van den Berg and Birk, discussed above. Particularly, Nilsson is silent with regard to an on-line cell counter and two independent mastitis indicators.**

Note from the rejection that Nilsson was not relied on for an on-line cell counter and two independent mastitis indicators. Nilsson is relied on for a teaching of wherein said first quantity of milk is collected from a first teat of milking animal and said second quantity of milk is collected from a second teat of said milking animal. See [0018] thru [0021]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first quantity of milk is collected from a first teat of a milking animal and said second quantity of milk is collected from a second teat of said milking animal as taught by Nilsson in the method of van den Berg as modified by Birk in order to analyze all teats for mastitis and not just only one teat.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Son T. Nguyen/  
Primary Examiner, Art Unit 3643

Conferees:

Marc Jimenez /MJ/

Robert Swiatek /rps/